

range of equal to and greater than 10 and equal to and less than 90, and tin in the weight percent range of equal to and less than 90 and equal to and greater than 10, and an electrical enhancing film deposited over the zinc stannate film, the electrical enhancing film selected from the group of films consisting of zinc oxide, tin oxide film and a second zinc stannate film wherein the composition of the first zinc stannate film is at least about 5 weight percent different than the composition of the second zinc stannate film, and an infrared reflective layer deposited on the dielectric layer,

a metal primer layer over the infrared reflective layer;

a second dielectric layer over the primer layer; and

a protective layer of at least two films selected from the group consisting of metal-containing films, which are from different transition metals of Groups 4, 5, 6, or 10 of the Periodic Table of Elements; and silicon-containing films; and metal and silicon films; and films of metal and metal-oxy materials; and films of metal and silicon oxy-materials; and films of silicon and metal-oxy materials; and films of silicon and silicon oxy-materials; and films of metal oxy and silicon oxy materials; where the oxy materials are selected from the group consisting of oxides and oxynitrides, and wherein the protective layer is in a position where it can perform the protective function for providing durability to the dielectric layer, infrared reflective layer, metal primer layer, and second dielectric layer.

3. (Amended) The coated article of claim 1 wherein the infrared reflective layer is a silver film and the silver film is deposited on the second zinc stannate film.

Q3 4. (Twice Amended) The coated article of claim 1 wherein the dielectric layer is a first dielectric layer and the infrared reflective layer is a first infrared reflective layer and further including:

a metal primer layer over the first infrared reflective layer;

a second dielectric layer over the primer layer and the protective layer is an overcoat over the second dielectric layer.

Q4 21. (Amended) The coating stack of claim 17 wherein the second zinc stannate film of the first dielectric layer is on the glass piece and has a thickness in the range of 230 ± 40 Angstroms Å; the first zinc stannate film of the first dielectric layer is on the second zinc stannate film of the first dielectric layer and has a thickness in the range of 80 ± 40 Å; the first infrared reflective metal layer is a first silver film deposited on the first zinc stannate film of the first dielectric layer and has a thickness in the range of 110 ± 30 Å, the metal primer layer is a titanium film deposited on the first silver layer and has a thickness in the range of $17-26$ Å; the first dielectric film of the second dielectric layer is deposited on the titanium film and has a thickness in the range of 80 ± 40 Å; the first zinc stannate film of the second dielectric layer is deposited on the first dielectric film of the second dielectric layer and has a thickness in the range of 740 ± 40 Å; the second infrared reflective metal layer is a second silver film deposited on the second dielectric film of the second dielectric layer and has a thickness in the range of 110 ± 38 Å; the second primer film is a titanium film deposited on the second silver layer and having a thickness in the range of $18 - 31$ Å; the first dielectric film of the third dielectric layer is deposited on the second titanium film and

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has a thickness in the range of $80 \pm 40\text{\AA}$; the first zinc stannate film layer of the third dielectric layer is deposited on the first dielectric film of the third dielectric layer and has a thickness in the range of $120 \pm 40\text{\AA}$, and the protective layer is a titanium metal film deposited on the first zinc stannate film layer of the third dielectric layer and has a thickness in the range of $29 \pm 3\text{\AA}$.

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22. (Twice Amended) The coated article of claim 1 wherein the protective layer has at least two films selected from the group consisting of a metal of titanium, zirconium, niobium, tantalum, chromium, nickel or alloys thereof; and a metal oxy material of titanium oxides, titanium oxynitride, zirconium oxides, zirconium oxynitrides, niobium oxides, niobium oxynitrides, tantalum oxide, tantalum oxynitride, chromic oxides, chromic oxynitrides, nickel oxide, or nickel oxynitride; and silicon oxide; and silicon dioxide; and silicon aluminum nitride and combinations and mixtures of any two or more of these, where the first film of the layer is the silicon, metal or the metal oxy material.

23. (Thrice Amended) A coated article comprising:
a substrate;
a first dielectric layer over the substrate;
a first infrared reflective layer over the first dielectric layer;
a first metal primer layer over the first infrared reflective layer;
a second dielectric layer over the first metal primer, the second dielectric layer having a first dielectric film selected from the group consisting of zinc oxide, tin oxide film and a first zinc stannate film, and a second dielectric film the second dielectric film having a

composition different than the first dielectric film of the second dielectric layer;

a second infrared reflective layer over the second dielectric layer;

a second primer layer over the second reflective layer;

a third dielectric layer over the second metal primer layer; and

a protective layer of at least two films selected from the group consisting of metal-containing films, which are selected from different transition metals of Groups 4, 5, 6 or 10 of the Periodic Table of Elements; and silicon-containing films; and metal and silicon films; and films of metal and metal-oxy materials; and films of metal and silicon oxy-materials; and films of silicon and metal-oxy materials; and films of silicon and silicon oxy-materials; and films of metal oxy and silicon oxy materials, where the oxy materials are or oxides or oxynitrides and wherein the protective layer is in a position where it can perform the protective function for providing durability to the dielectric layers, infrared reflective layers, and metal primer layers.

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26. (Thrice Amended) A coated article comprising:

a substrate;

a first dielectric layer over the substrate;

a first infrared reflective layer over the first dielectric layer;

a first metal primer layer over the first infrared reflective layer;

a second dielectric layer over the first metal primer layer;

a second infrared reflective layer over the second dielectric layer;

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a second metal primer layer over the second reflective metal layer;

a third dielectric layer having a first dielectric film selected from the group consisting of zinc oxide film; zinc oxide, tin oxide film; a first zinc stannate film and a second dielectric film overlying the first dielectric film, the second dielectric film having a composition different from the first dielectric film; and

the protective layer overlying the third dielectric layer where the protective layer is at least two films selected from the group consisting of: metal-containing films, which are of different transition metals of Groups 4, 5, 6 or 10 of the Periodic Table of Elements; and silicon-containing films; and metal and silicon films; films of metal and metal-oxy materials; films of metal and silicon oxy-materials; films of silicon and metal-oxy materials; films of silicon and silicon oxy-materials; films of metal oxy and silicon oxy materials; where the oxy materials are from oxides or oxynitrides.

29. (Thrice Amended) A coated article comprising:
a substrate;
a first dielectric layer over the substrate;
a first infrared reflective layer over the first dielectric layer;
a first primer layer over the first reflective metal layer;
a second dielectric layer having a first dielectric film selected from the group consisting of a zinc oxide, tin oxide film and a first zinc stannate film, and a second dielectric film overlying the first dielectric film having a composition different than the first dielectric film of the second dielectric layer;

a second infrared reflective layer over the second dielectric layer;

a second primer layer over the second reflective layer;

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a third dielectric layer over the second metal primer layer, the third dielectric layer having a first dielectric film selected from the group consisting of a zinc⁷⁶ oxide, tin oxide film and a first zinc stannate film and a²¹ second dielectric film, the second dielectric film of the²² third dielectric layer have a composition different than the composition of the second dielectric film of the third dielectric layer; and

the protective layer overlying the third dielectric layer where the protective layer is at least two films selected from the group consisting of: metal-containing and silicon-containing films, which are different metals, or metal and silicon, or metal and metal-oxy materials, or metal and silicon oxy-materials, or silicon and metal-oxy, or silicon and silicon oxy-materials, or metal oxy and silicon oxy materials, where the oxy materials are selected from the group consisting of oxides and oxynitrides and where the metal is selected from the group consisting of a transition metal of Groups 4, 5, 6 or 10 of the Periodic Table of Elements.

36. (Twice Amended) A coated article comprising:
a substrate;
at least one dielectric layer over the substrate;
at least one infrared reflective layer over the
first dielectric layer;
optionally a first metal primer layer over the first infrared reflective layer;
optionally a second dielectric layer over a first metal primer; and

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and
at least one protective layer selected from (A) a heat convertible metal film wherein the metal is selected from zirconium, niobium, tantalum, chromium, nickel and alloys thereof and alloys with silicon at a thickness for the layer of 15 to 25 Å, (B) at least two films selected from metal-14 containing and/or silicon-containing films selected from: metal and/or silicon and metal-oxy and or silicon oxy-materials where the oxy materials are selected from oxides and oxynitrides and where the metal is the same or different and selected from a transition metal of Groups 4, 5, 6 or 10 of the Periodic Table of Elements, wherein the protective layer is located in the stack of layers to provide durability to the stack of layers.

41. (Thrice Amended) A coated article of Claim 37 wherein the protective layer has at least two films selected from the groups consisting of metal and silicon; or of metal oxy material and silicon oxy material and is located over the second dielectric layer that is on the reflective layer and a third optional dielectric layer over the protective layer.
